

**Conclusion:** This study demonstrated that silent AF detected by CEM is common and associated with older age. Further studies are needed to investigate the interest of systematical screening for silent AF for secondary prevention after ischemic stroke.

## 0422

### Atrial fibrillation (AF): the cardioversion in the era of ablation

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**Introduction:** If the management of atrial fibrillation in its thromboembolic component knows more adherences to recommendations, it should be noted that the rhythmic component is experiencing a trend towards acceptance of the AF at the expense of a restoration strategy sinus rhythm.

**Purpose:** To evaluate the effectiveness of the drug cardioversion or electrical cardioversion in patients hospitalized in the cardiology department of HMIMV Rabat.

**Materials and Methods:** This is a prospective study conducted over a period of one year, including 45 patients with non-valvular AF, candidates for chemical or electrical cardioversion. All our patients have undergone transthoracic echocardiography, sometimes supplemented with a transesophageal echocardiography and an assessment of thyroid

**Results:** The average age of our patients was 52.7 years with a sex ratio 2/1. 25% of our patients had hypertensive heart disease, 8% ischemic heart disease, 4% dilated cardiomyopathy and the rest had a healthy heart. The average diameter of the left atrium was 41 cm with an average surface to 19 cm<sup>2</sup>. 60% of our patients have undergone cardioversion by external shock, and 40% of them by injection of amiodarone or flecainide. The rate of restoration of sinus rhythm was 78%, with a recurrence rate at one month 19%. The predictive factors of recurrence were an ancient atrial fibrillation, a large left atrium and a score CHA2DS2-VASc  $\geq 1$ .

**Conclusion:** This study, showing an acceptable level of restoration and maintenance of sinus rhythm, confirms the interest of promoting a strategy of rhythm control, subject to patient selection on predictors of success.

## 0328

### Electrotonic modulation of the transmural action potential duration heterogeneity in sheep ventricles

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Transmural APD heterogeneity is thought to play an important role in homogeneous repolarization of the ventricles. Abnormal heterogeneity of action potential duration (APD) in ventricles is known to contribute to arrhythmogenesis. It has been shown to be modulated by electrotonic influences in small species, yet this finding remains to be confirmed in large mammals.

The goal of the present study was to investigate APD differences between epi- and endocardium depending on the pacing location and after a reduction in intercellular coupling in sheep ventricles.

Optical mapping experiments were performed in coronary-perfused wedge preparations from sheep left (LV; N=8) or right ventricles (RV; N=3). The wedges were paced at 2Hz on either the endo- or epicardial surface. We also investigated the effect of carbenoxolone (50  $\mu$ M) in the RV experiments.

In the LV experiments, we observed a significant APD difference between endo- (306.45 $\pm$ 18.29ms) and epicardium (276.05 $\pm$ 9.87ms) when pacing the endocardium ( $P<0.01$ ). However, this transmural heterogeneity was lost when pacing the epicardium, with endocardial APDs of 284.10 $\pm$ 25.67 ms vs 289.8 $\pm$ 36.24 ms at the epicardium. A similar observation was made in the RV with a significant increase in epicardial APD when pacing the epicardium (230.17 $\pm$ 11.32 ms) vs the endocardium (217.73 $\pm$ 19.50 ms) ( $P<0.01$ ). Upon perfusion with carbenoxolone epicardial APDs significantly increased by 10% ( $P<0.01$ ) and the difference in epicardial APD between epicardial and endocardial pacing was no longer significant.

In conclusion, we find that the epi- and endocardial APDs are modulated by the activation sequence. Specifically, we observe a significant increase in epicardial vs endocardial APD when pacing the epicardium in both the RV and LV and an associated decrease in transmural APD heterogeneity. This effect was abolished upon perfusion with carbenoxolone indicating a role for electronic currents in modulating transmural APD heterogeneity.

## 0356

### Prognostic value of CHA2DS2-VASc score in patients with atrial fibrillation and valvular heart disease

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The CHA2DS2-VASc score estimates the risk of stroke in non-valvular atrial fibrillation (AF). Nonetheless, there are limited data on the risk of stroke/thromboembolic (TE) complications in AF patients with valvular heart disease, other than those with valvular prosthesis or rheumatic mitral valve disease.

**Methods:** Among 8962 patients with AF seen between 2000 and 2010, patients were categorised into Group 1 “non valvular AF” (n=6851; 78%), Group 2 “quasi valvular AF” ie. valve disease with neither rheumatic mitral stenosis nor valve prosthesis (n=1202; 13%) and Group 3 “valvular AF” (n=909; 9%) using ESC AF guidelines definition.

**Results:** In group 2, 61% of the patients had mitral regurgitation (n=917, non severe in 52%, severe in 9%), 24% had aortic regurgitation (n=414, non severe in 22%, severe in 2%) and 32% had aortic stenosis (n=555, non severe in 18%, severe in 14%). In group 3, 88% of the patients with valvular AF had valve prostheses (n=797) and 14% had mitral stenosis (n=124). After follow up of 884 $\pm$ 1084 days, 715 stroke/TE events were recorded. Group 2 was significantly older, had a higher CHA2DS2-VASc score and had a higher risk of TE events (relative risk 1.39; 95%CI 1.14-1.69) compared with Group 1. Severe valve disease was not associated with worse prognosis for stroke/TE events (relative risk 1.12, 95%CI 0.78-1.61). In the 3 groups, stroke/TE risk increased with a higher CHA2DS2-VASc score. Factors independently associated with increased risk of stroke/TE events were older age (RR 1.02, 95%CI 1.01-1.03) and higher CHA2DS2-VASc score (RR 1.33, 95%CI 1.23-1.45). The increased risk of stroke/TE events in patients from Group 2 (compared to those from Group 1) did not reach statistical significance in multivariate analysis.

**Conclusions:** In patients with AF, left-sided valvular heart disease (excluding mitral stenosis and prostheses) was associated with an increased risk of stroke/TE events. A higher CHA2DS2-VASc score was the main driver of these events.